

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

John A. Sazy

Application No. 10/655,571

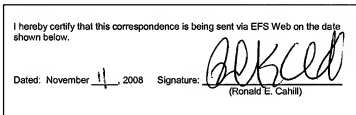
Conf. No. 6429

Filed: September 4, 2003

Art Unit: 3738

For: INTERVERTEBRAL CAGE AND METHOD
OF USE

Examiner: Brian E. Pellegrino



Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF

In response to the Examiner's Answer to Appellant's Brief dated September 18, 2008,
Appellant states in response to Examiner's arguments as follows:

I. Introduction

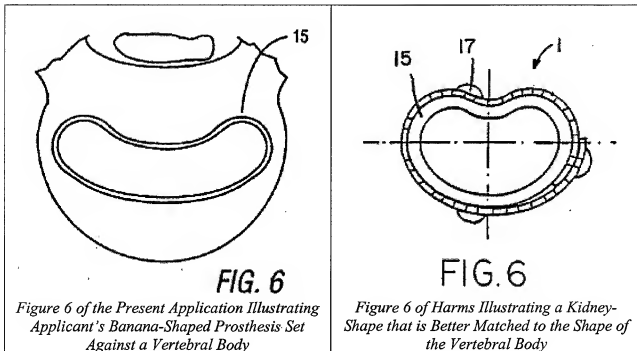
Appellant has appealed the rejection of claims 1, 3, 5, 6, and 10-31 (all of the pending claims), and submitted an Appeal Brief on June 6, 2008 (and an Amended Appeal Brief on June 24, 2008). The Examiner filed an Answer to the Appeal Brief on September 18, 2008 to which Appellant now responds.

All of the bases for rejection have been addressed in the Appeal Brief, and Appellant submits this Reply Brief only to address the Examiner's "Response to Argument."

II. Reply

A. Bananas and Kidneys Have Distinctly Different Shapes

A banana-shape and a kidney-shape are different shapes. A person of ordinary skill in the art would have no trouble recognizing that a banana-shape is thinner than a kidney shape, and would further have no trouble recognizing that this is a key distinction of Applicant's claimed prosthesis. Each of the cited references refers to its prosthesis as kidney-shaped. Each of the cited references notes that the kidney shape is important because it is a goal of those authors to match the shape of the prosthesis to the shape of the shape of the vertebral end-plates where they will be implanted. The easiest way to see this is by comparing directly Applicant's banana-shaped prosthesis to a kidney-shaped prosthesis in the prior art (in this case from the Harms patent):



Bananas and kidneys are both distinctly shaped, and their shapes are different. Applicant has provided dictionary definitions of these terms to show that their usage is both distinct and differentiated. The Examiner responds:

However, the Examiner respectfully disagrees because not all banana and kidney shapes are necessarily different as Appellant alleges. [Answer at p. 7.]

But, the Examiner has never provided, and does not provide now, an example of a banana having a kidney-shape.

The Examiner also asserts that:

Appellant then admits there are different banana shapes, but argues that "banana-shape" is considered different than a kidney shape, page 9 of Brief. [Answer at p. 7.]

Resort to page 9 of the Brief highlights the problem with this line of rejection:

It goes without saying, as the Examiner notes, that bananas come in different sizes and colors - but size and color is irrelevant to the claim term "banana-shaped." Large bananas are banana-shaped just as small bananas are banana-shaped. Green bananas are banana-shaped just as yellow

bananas are banana-shaped. It is also true that there is some variation in the shape of bananas, but this variation is quite limited, and in every case, the shape of the banana is distinct from the shape of a kidney – a point that the Examiner never addresses.

A kidney-shaped prosthesis cannot anticipate a banana-shaped prosthesis where the only evidence, and all of the common usage, tells us that they are not the same shape.

B. The Examiner's Interpretation of "Banana-Shaped" is Unreasonable

Next, the Examiner redefines "banana-shaped" so that "banana-shaped" is defined only by the things that it has in common with a kidney-shape (i.e., that both have two radii (Answer at p. _). While the Examiner is entitled to give claim language its broadest reasonable interpretation, that interpretation must be reasonable. *See, e.g., In re Buszard*, 2007 U.S. App. LEXIS 22806 (Fed. Cir., September 27, 2007) (Reversing rejection made by Board based upon an unreasonably broad interpretation of the claim term "flexible polyurethane foam reaction mixture" as "any reaction mixture which produces, at least ultimately, a flexible polyurethane foam.") MPEP § 2111 further lays out the "broadest reasonable interpretation" standard:

During patent examination, the pending claims must be "given their **broadest reasonable interpretation consistent with the specification.**" The Federal Circuit's *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) expressly recognized that the USPTO employs the "broadest reasonable interpretation" standard:

The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 CFR 1.75(d)(1).

415 F.3d at 1316, 75 USPQ2d at 1329. *See also, In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).

When viewed reasonably, a banana-shaped device is thinner than a kidney-shaped device. In this case, the shape is clearly defined in the specification with respect to the vertebral endplate against which it is placed. The claimed prosthesis is narrower than that endplate while prior art devices are kidney-shaped so as to match it. The Examiner does not apply the clear legal standards and, as was the case in *Buszard*, the rejection should be reversed.

C. Schafer Teaches Away from the Claimed Ratio of Length to Width

Claim 30 depends from claim 1 and recites that “the banana-shape of the unitary body includes a width and length wherein the width is at least 2.4 times greater than the length.” This recitation quantifies the thinness of the banana-shape that distinguishes over the kidney-shaped prior art. None of the cited art provides a prosthesis this thin.

According to the Examiner, the closest that the prior art comes to a banana-shape having this level of thinness is a figure in the Schafer reference. The Examiner states

Since Schafer has the same shape as Appellant and shows that the dimension Appellant nominally calls the width as being greater than the length dimension, it can be seen there is a difference in dimension of clearly greater than two times.

First, Applicant disagrees. The Examiner has relied upon a perspective view of Schafer that distorts the view of the claimed ratio. [See, e.g., the rejection, including figures, quoted on page 7 of Applicant's Brief.] The top views provided in Schafer clearly show a fatter kidney-shaped prosthesis. Further, the Federal Circuit has made it very clear that arguments based on patent drawings that are not expressly made to scale are unavailing. *Nystrom v. Trex Co., Inc.*, 424 F.3d 1136 (Fed. Cir. 2005). According to the Court: “it is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.” *Id.* at 1149. Here, there is no indication in Schafer patent that its drawings are made to scale. The Examiner's estimation based on a drawing not made to scale is not a teaching in the art.

The Examiner next argues that it would be obvious to change Schafer to make it thinner according to claim 30:

However, as mentioned above in the Examiner's rejection- Schafer did not explicitly state the dimension being 2.4 times, but Schafer did state the dimension can be altered to change the radius and thus this can be interpreted as to lengthen the arc, see col. 2, lines 28-31. Appellant argues one of ordinary skill would not modify the shape since claim 30 is said to have nothing to do with size, (Appellant's Brief, page 13). Appellant is mistaken, since length and width are clearly size limitations and Schafer's cage would have obviously had a change in shape if one were to modify size (length or width dimensions) to change the radius of curvature as suggested by Schafer. [Answer at pp. 8-9.]

The limitation in question is a ratio of dimensions that quantifies the thinness of the claimed banana-shape and shows how it is different from the kidney-shapes in the prior art and different from the shape of the vertebral body where the prosthesis will be implanted. This is apparent from Figure 6 reproduced above. Schafer encourages the person of ordinary skill not to modify its prosthesis to meet the recitations of claim 30. Schafer repeatedly calls his prosthesis "kidney-shaped" and expressly prefers the kidney-shape for connection to the vertebral body. [See quotes and cites to Schafer and other references at pages 10 to 12 of Applicant's Appeal Brief] Claim 30 quantifies the shape shown in Figure 6 above to be thinner than, and thus different from, the shape of the vertebral body.

It would be inappropriate for a person of ordinary skill to modify Schafer by shaping the prosthesis contrary to the teaching in Schafer and contrary to the teaching in all of the art of record simply because the size can be changed. Claim 30 is patentable over Schafer.

III. Conclusion

For the reasons noted above, as well as those argued in Appellant's Appeal Brief, Appellant submits that the pending claims define patentable subject matter.

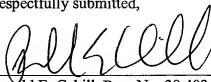
In the event that a petition for an extension of time is required to be submitted at this time, Applicant hereby petitions under 37 CFR 1.136(a) for an extension of time for as many

months as are required to ensure that the above-identified application does not become abandoned.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 141449, under Order No. 101896-706.

Dated: November 11, 2008

Respectfully submitted,



Ronald E. Cahill, Reg. No. 38,403
Attorney for Appellant
NUTTER McLENNEN & FISH LLP
World Trade Center West
155 Seaport Boulevard
Boston, MA 02210-2699
Telephone: (617) 439-2000
Facsimile : (617) 310-9000